AMENDMENTS TO THE CLAIMS

1.   (Cancelled)

2.   (Cancelled)

3.   (Currently Amended) A method of managing traffic by determining numbers of packets transferred via a site in a telecommunications network including routers and network segments interconnected to the routers for transferring packets over the network, comprising the steps of:

holding routing tables including an indication of a next router to which a packet is to be transmitted next and Use columns associated with the routing tables at the routers;

collecting the routing tables and the Use columns from the routers and storing the routing tables and the Use columns collected in connection with the routers;

storing information on connections between subject ones of the routers to be managed and connections between the subject routers and subject ones of the network segments to be managed in a topology database;

rearranging the Use columns collected with respect to a destination network segment of the network segments, and indexing the routers to which the Use columns belong to form a calculation table for calculating a number of first packets sent together with the indication of next routers associated with the Use columns;

preparing a model of router-to-network traffic distribution matrix based on the topology database;

determining, based on the indication of next routers listed on the calculation table, whether or not the subject router has relayed a packet sent from preceding one of the routers which is upstream the subject router;

using, if the subject router has not relayed a packet, a value in the Use column of the subject router as a number of second packets sent between the subject router and the destination

network segment, or subtracting, if the subject router has relayed a packet, a value in the Use

column of the preceding router from a value in the Use column of the subject router to use a

resultant value as the number of packets; and

modifying the model of router-to-network traffic distribution matrix with the number of

the second packets calculated to form a first router-to-network traffic distribution matrix; and

managing the model of router-to-network traffic distribution matrix at a traffic

distribution manager.

4.   (Original) The method in accordance with claim 3, wherein the first router-to-

network traffic distribution matrix has a row of a destination network segment, further

comprising the steps of:

preparing a model of router-to-router traffic distribution matrix based on the topology

database;

searching, by referencing the topology database, for one of the routers which is directly

connected to the destination network segment;

selecting destination network segments belonging to the router searched for in the first

router-to-network traffic distribution matrix, and adding values in the rows corresponding to the

destination network segments selected to each other to thereby calculate a number of packets

transmitted between the router searched for and a source router; and

modifying the model of router-to-router traffic distribution matrix with the number of

packets calculated to form a router-to-router traffic distribution matrix.

5.   (Original) The method in accordance with claim 3, further comprising the steps

of:

preparing first interface statistics including a number of packets transmitted at the routers;

collecting the first interface statistics from the routers;

searching, by referencing the topology database, for one of the routers which is directly connected to the destination network segment, and searching the routing table of the router searched for to locate an interface between the router and the destination network segment;

searching for the first interface statistics for the routers in respect of a combination of a network, a router and an interface to generate second interface statistics for the destination network segment;

holding current and immediately preceding ones of the second interface statistics;

using the current and immediately preceding second interface statistics to calculate a mean length of the packets for the destination network segment;

obtaining a difference in a number of packets between current and immediately preceding ones of the first router-to-network traffic distribution matrices to form a second router-to-network traffic distribution matrix; and

multiplying values in the second router-to-network traffic distribution matrix by the mean length of the packets for the destination network segment corresponding to the second router-to-network traffic distribution matrix to form a third router-to-network traffic distribution matrix based on a used frequency band.

6.   (Original) The method in accordance with claim 5, wherein the mean length of the packets is calculated as a mean length of L3 packets.

7.   (Cancelled)

8.   (Cancelled)

9.   (Currently Amended) A traffic managing apparatus for determining numbers of packets transferred via a site in a telecommunications network including routers and network segments interconnected to the routers for transferring packets over the network, comprising:

a management information access circuit for collecting routing tables held at the routers and Use columns associated with the routing tables and held at the routers, the routing tables including an indication of a next router to which a packet is to be transmitted next;

a routing table and Used column manager for storing the routing tables and the Use columns collected in connection with the routers;

a network topology manager for storing information on connections between subject ones of the routers to be managed and connections between the subject routers and subject ones of the network segments to be managed to form a topology database; and

a traffic distribution manager for preparing a model of router-to-network traffic distribution matrix based on the topology database, rearranging the Use columns stored with respect to a destination network segment of the network segments, and indexing the routers to which the Use columns belong to form a calculation table for calculating a number of packets sent together with the indication of next routers associated with the Use columns, determining, based on the indication of next routers listed on the calculation table, whether or not the subject router has relayed a packet sent from preceding one of the routers which is upstream the subject router, using, if the subject router has not relayed a packet, a value in the Use column of the subject router as a number of packets sent between the subject router and the destination network segment, or subtracting, if the subject router has relayed a packet, a value in the Use column of the preceding router from a value in the Use column of the subject router to use a resultant value as the number of packets, [[and]] modifying the model of router-to-network traffic distribution matrix with the number of packets calculated to form a first router-to-network traffic distribution matrix, and managing the model of router-to-network traffic distribution matrix.

10.   (Original) The apparatus in accordance with claim 9, wherein the first router-to-network traffic distribution matrix has a row of a destination network segment, further comprising a router-router traffic calculator for preparing a model of router-to-router traffic distribution matrix based on the topology database, referencing the topology database to search for one of the routers which is directly connected to the destination network segment, selecting destination network segments belonging to the router searched for in the first router-to-network

traffic distribution matrix, adding values in the rows corresponding to the destination network segments selected to each other to thereby calculate a number of packets transmitted between the router searched for and a source router, and modifying the model of router-to-router traffic distribution matrix with the number of packets calculated to form a router-to-router traffic distribution matrix.

11.   (Original) The apparatus in accordance with claim 9, further comprising:

an interface statistics manager for causing said management information access circuit to collect first interface statistics from the routers, the first interface statistics including a number of packets transmitted at the routers; and

a used frequency band calculator for referencing the topology database to search for one of the routers which is directly connected to the destination network segment, searching the routing table of the router searched for to locate an interface between the router and the destination network segment, searching for the first interface statistics for the routers in respect of a combination of a network, a router and an interface resultant from a located interface to generate second interface statistics for the destination network segment, calculating a mean length of the packets for the destination network segment on a basis of current and immediately preceding ones of the second interface statistics, obtaining a difference in a number of packets between current and immediately preceding ones of the first router-to-network traffic distribution matrices to form a second router-to-network traffic distribution matrix, and multiplying values in the second router-to-network traffic distribution matrix by the mean length of the packets for the destination network segment corresponding to the second router-to-network traffic distribution matrix to form a third router-to-network traffic distribution matrix based on a used frequency band.

12.   (Original) The apparatus in accordance with claim 11, wherein the mean length of the packets is calculated as a mean length of L3 packets.

13.   (Cancelled)

14.   (Currently Amended) A telecommunications network comprising:

a plurality of routers for transferring packets over said network, and network segments interconnected to said plurality of routers, said plurality of routers holding routing tables and Use columns associated with the routing tables, the routing tables including an indication of a next router to which a packet is to be transmitted next; and

traffic managing apparatus for determining numbers of packets transferred via a site in said network;

said apparatus comprising:

a management information access circuit for collecting the routing tables and the Use columns held at the routers;

a routing table and Used column manager for storing the routing tables and the Use columns collected in connection with the routers;

a network topology manager for storing information on connections between subject ones of the routers to be managed and connections between the subject routers and subject ones of the network segments to be managed to form a topology database; and

a traffic distribution manager for preparing a model of router-to-network traffic distribution matrix based on the topology database, rearranging the Use columns stored with respect to a destination network segment of the network segments, and indexing the routers to which the Use columns belong to form a calculation table for calculating a number of first packets sent together with the indication of next routers associated with the Use columns, determining, based on the indication of next routers listed on the calculation table, whether or not the subject router has relayed a packet sent from preceding one of the routers which is upstream the subject router, using, if the subject router has not relayed a packet, a value in the Use column of the subject router as a number of second packets sent between the subject router and the destination network segment, or subtracting, if the subject router has relayed a packet, a value in the Use column of the preceding router from a value in the Use column of the subject router to

use a resultant value as the number of packets, [[and]] modifying the model of router-to-network traffic distribution matrix with the number of the second packets calculated to form a first router-to-network traffic distribution matrix, and managing the model of router-to-network traffic distribution matrix.